

with AUO as the surviving entity. AUO further merged Taiwan CFI Co., Ltd. (“CFI”) on October 1, 2016, with AUO as the surviving entity.

3. On information and belief, AUO is a multi-national corporation organized under the laws of the Republic of China, with its principal place of business located at No. 1, Li-Hsin Road 2, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C. AUO does business in the State of Texas and in the Eastern District of Texas.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(c). AUO is a foreign entity and may be sued in any judicial district under 28 U.S.C. § 1391(c)(3).

7. On information and belief, AUO is subject to this Court’s specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this State and judicial district, including: (A) at least part of its infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents. For example, “AUO generated NT\$329 billion in sales revenue in 2016 (US\$10.2 billion) and now houses a staff of more than 43,000 throughout its global operations spreading across Taiwan, Mainland China, Japan, Singapore, South Korea, the United States, and Europe. https://www.auo.com/en-global/About_AUO/index) (emphasis added). AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are

TFT-LCD panels. SEC Form 20-F, AU Optronics Corp. (2018) at 32 (*available at* <https://seekingalpha.com/filings/pdf/12654022.pdf>). AUO sells primarily to companies that design and assemble products based on their customers' specifications, commonly known as original equipment manufacturing service providers, and to brand customers. *Id.* Its original equipment manufacturing service provider customers, most of whose production operations are located in Taiwan or the PRC, use its panels in the products that they manufacture on a contract basis for brand companies worldwide. *Id.* (emphasis added).

8. This Court has personal jurisdiction over AUO, directly or through intermediaries, including its wholly-owned subsidiary, AU Optronics Corporation America (1525 McCarthy Blvd. Suite 218 Milpitas, CA 95035) because it has committed acts within Texas giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over AUO would not offend traditional notions of fair play and substantial justice.

9. Upon information and belief, AUO controls the wholly-owned subsidiary listed above, as well as many other subsidiaries. https://www.auo.com/en-global/Financial_Results/download/1551 ("March 31, 2018 Report") at 16-19. And the subsidiary above gives AUO substantially the business advantages that it would have enjoyed if it conducted its business through its own offices or paid agents in the state.

10. Upon information and belief, AUO has placed and continues to place infringing TFT-LCD panels into the stream of commerce via an established distribution channel with the knowledge and/or intent that those products were sold and continue to be sold in the United States and Texas, including in this District.

11. On information and belief, AUO has significant ties to, and presence in, the State of Texas and the Eastern District of Texas, making venue in this judicial district both proper and convenient for this action.

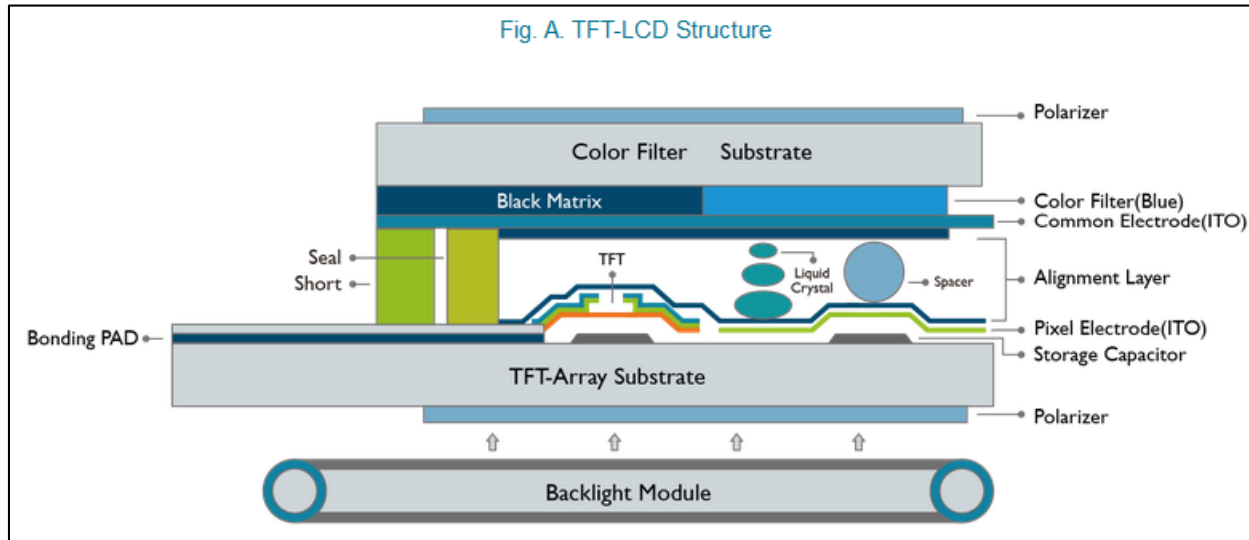
THE ASSERTED PATENTS AND TECHNOLOGY

12. Upon information and belief, AUO's main activities are the research, development, production and sale of thin film transistor liquid crystal displays ("TFT-LCDs") and other flat panel displays used in a wide variety of applications. https://www.auo.com/en-global/Financial_Results/download/1551.

13. The Asserted Patents cover AUO's TFT-LCDs, their components, and processes related to the same. An example AUO TFT-LCD is model no. T500HVN09, which is used in end-user products such as Samsung monitor model no. UN50J6300AF. That monitor and the label for its AUO TFT-LCD panel are shown below:

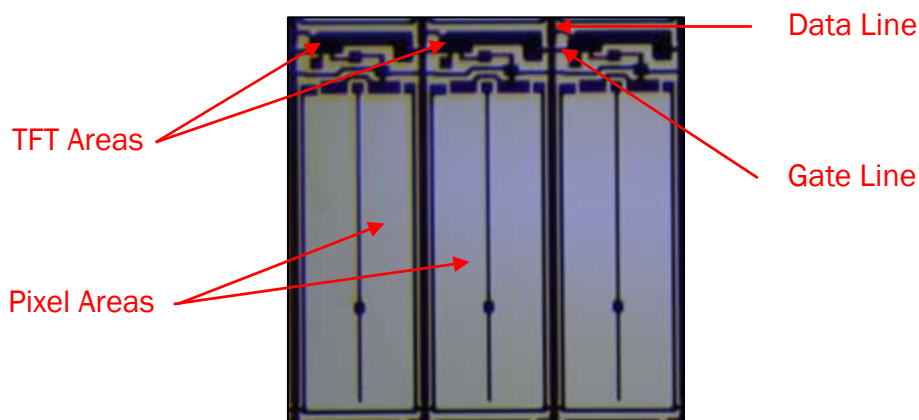


14. AUO publishes a diagram of the structure of its TFT-LCDs as follows:



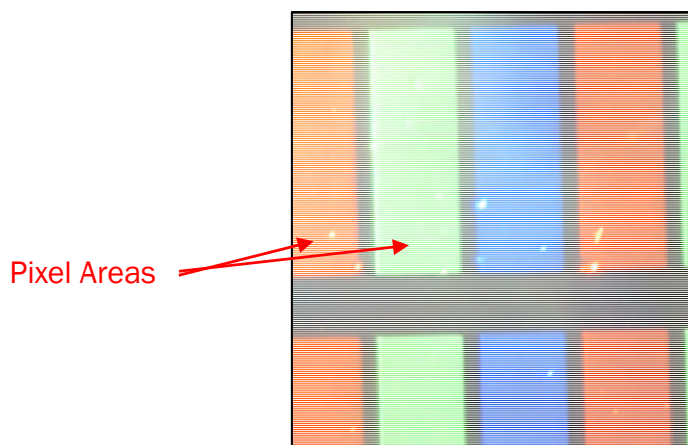
https://www.auo.com/en-global/TFT-LCD_Introduction/index/TFT_LCD_Process

15. As shown in the diagram above, the TFT-LCD panel contains a TFT array substrate, with one of the TFTs in the array illustrated above it. A teardown image below from the AUO TFT-LCD model no. T500HVN09 shows a sampling of TFTs and their accompanying circuitry lines, with larger rectangular areas associated with the pixels.

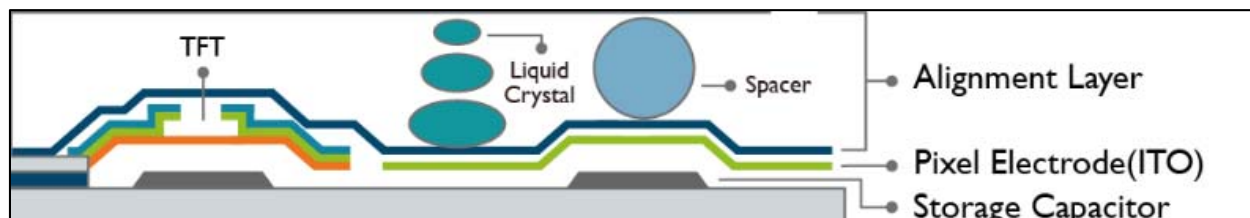


16. A TFT acts as a switch that operates its respective individual pixels using the circuitry lines. In that way, the pixels can be turned on and off to create an image on an LCD by

allowing or preventing light to pass through. The individual pixels are more apparent when a color filter layer overlays the circuits as shown in the image below for the T500HVN09.

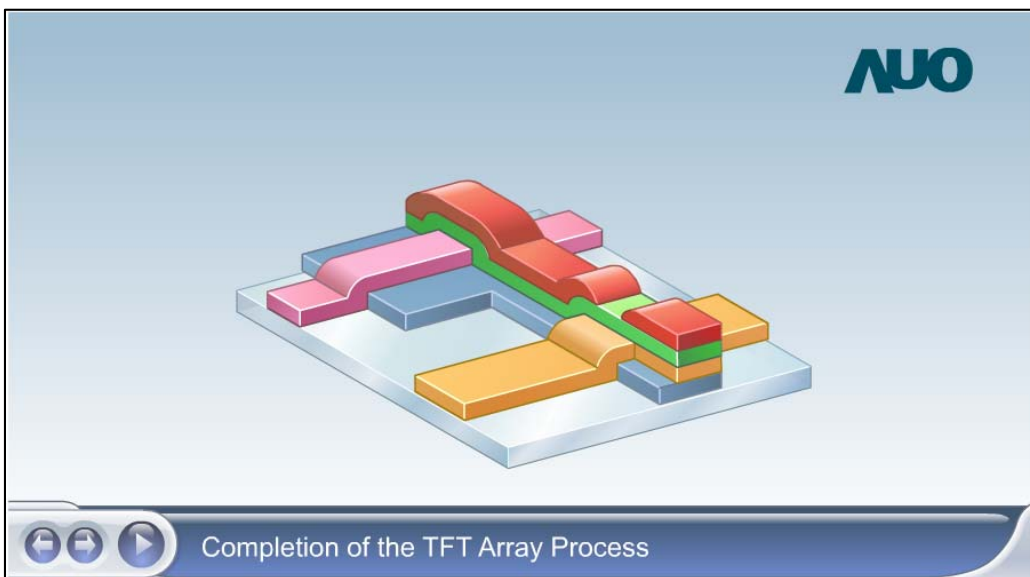
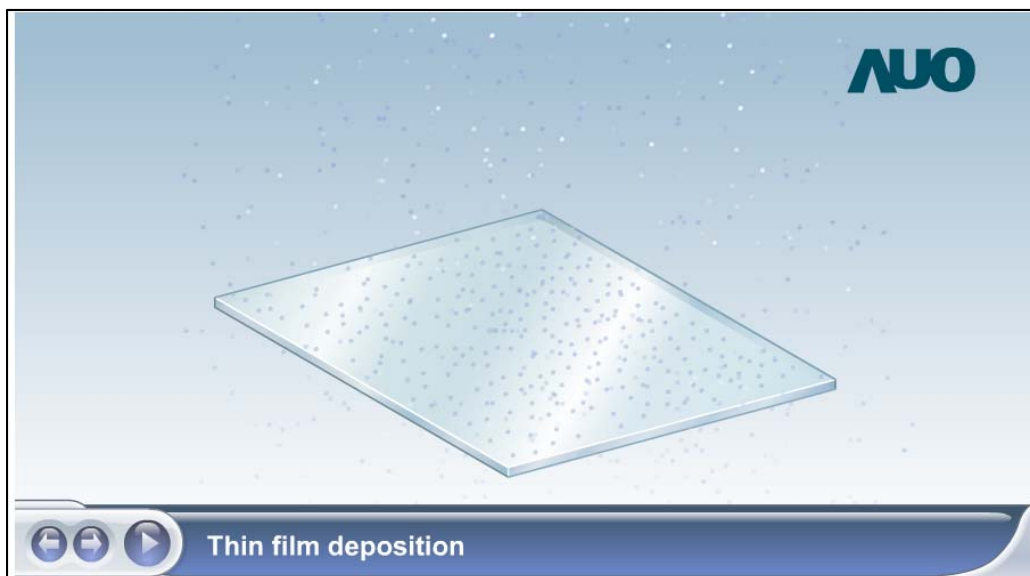


17. AUO publishes a simplified version of a side view of its TFTs on its website as shown below.



https://www.auo.com/en-global/TFT-LCD_Introduction/index/TFT_LCD_Process (excerpt).

18. The Asserted Patents also cover AUO's processes for making TFT LCDs. AUO explains the steps in the process of making its TFTs in an animation on its website at https://www.auo.com/en-global/TFT-LCD_process_animation/index/. The animations include many steps including, "Thin Film Deposition" (below) and "Completion of the TFT Array Process" (below).



COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 5,929,947)

19. Plaintiff incorporates paragraphs 1 through 18 herein by reference.

20. VPV is the assignee of the '947 patent, entitled "Liquid crystal display thin film transistor array with redundant film formed over a contact hole and method of fabricating the same," with ownership of all substantial rights in the '947 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

21. The '947 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '947 patent issued from U.S. Patent Application No. 09/168,085.

22. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '947 patent in this judicial district and elsewhere in Texas and the United States.

23. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optronics Corp. (2018) at 32.

24. AUO directly infringes the '947 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '947 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '947 patent.

25. For example, AUO infringes claim 1 of the '947 patent via its LCD panel model no. T500HVN09. That product includes “[a] liquid crystal display thin film transistor array comprising” each of the limitations of claim 1. The technology discussion above and the example accused TFT-LCD panel (T500HVN09) provide context for Plaintiff’s allegations that each of those limitations are met. For example, the T500HVN09 includes a plurality of parallel gate bus lines arranged on a transparent insulating substrate; a plurality of drain bus lines arranged perpendicularly to said gate bus lines and electrically isolated from said gate bus lines by a first insulating film; a thin film transistor arranged near an intersection of said gate bus line and said drain bus line; and a pixel electrode arranged in a region surrounded by said gate bus lines and said drain bus lines and made of a transparent conductive film, said thin film transistor comprising a gate electrode formed on said transparent insulating substrate and electrically connected to said gate bus line, a drain electrode formed via said first insulating film, a channel layer, and a contact layer and electrically connected to said drain bus line, and a source electrode formed via said first insulating film, said channel layer, and said contact layer and electrically connected to said pixel electrode, and said pixel electrode being electrically isolated from said drain electrode and said drain bus line by a second insulating film, wherein a contact hole which is to be electrically connected to said drain bus line is formed in said second insulating film stacked on said drain bus line in a region including the intersection of said gate bus line and said drain bus line, and an interconnection redundant film made of the same transparent conductive film as said pixel electrode is formed on said second insulating film so as to cover said contact hole.

26. AUO further infringes the '947 patent via 35 U.S.C. § 271(g) by selling, offering to sell, and/or importing TFT-LCD panels, their components, and/or products containing same, that are made by a process covered by the '947 patent. Upon information and belief the infringing

TFT-LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another product.

27. At a minimum, AUO has known of the '947 patent at least as early as the filing date of the complaint. In addition, AUO has known of the '947 patent since May 16, 2018, when AUO was provided access to a data room containing claim charts, including for the '947 patent.

28. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include or are made using all of the limitations of one or more claims of the '947 patent to directly infringe one or more claims of the '947 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '947 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*, <https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

29. On information and belief, despite having knowledge of the '947 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '947 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '947 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

30. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 6,579,749)

31. Plaintiff incorporates paragraphs 1 through 30 herein by reference.

32. VPV is the assignee of the '749 patent, entitled "Fabrication method and fabrication apparatus for thin film transistor," with ownership of all substantial rights in the '749 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

33. The '749 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '749 patent issued from U.S. Patent Application No. 09/440,615.

34. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '749 patent in this judicial district and elsewhere in Texas and the United States.

35. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optronics Corp. (2018) at 32.

36. AUO directly infringes the '749 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '749 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '749 patent.

37. For example, AUO infringes claim 1 of the '749 patent via its LCD panel model no. T500HVN09. That product is made by AUO pursuant to a "method for fabricating a semiconductor device, comprising the steps of" each of the limitations of claim 1. The technology discussion above and the example accused TFT-LCD panel (T500HVN09) provide context for Plaintiff's allegations that each of those limitations are met. For example, the T500HVN09 includes semiconductor devices made pursuant to a first step of forming an amorphous silicon film on a substrate; and a second step of performing plasma processing with respect to said substrate having said amorphous silicon film formed thereon, said plasma containing an n-type impurity element selected from a group V of a periodic table to provide an n-type region in the top surface

of the amorphous silicon film; and then directly a third step of forming a metal film on said amorphous silicon film to form an n-type amorphous silicon film therebetween.

38. AUO further infringes the '749 patent via 35 U.S.C. § 271(g) by selling, offering to sell, and/or importing TFT-LCD panels, their components, and/or products containing same, that are made by a process covered by the '749 patent. Upon information and belief the infringing TFT-LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another product.

39. At a minimum, AUO has known of the '749 patent at least as early as the filing date of the complaint. In addition, AUO has known of the '749 patent since May 16, 2018, when AUO was provided access to a data room containing claim charts, including for the '749 patent.

40. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include or are made using all of the limitations of one or more claims of the '749 patent to directly infringe one or more claims of the '749 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '749 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*, <https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the

United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

41. On information and belief, despite having knowledge of the '749 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '749 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '749 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

42. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 6,674,093)

43. Plaintiff incorporates paragraphs 1 through 42 herein by reference.

44. VPV is the assignee of the '093 patent, entitled "Active matrix substrate and manufacturing method therefor," with ownership of all substantial rights in the '093 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

45. The '093 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '093 patent issued from U.S. Patent Application No. 09/695,321.

46. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '093 patent in this judicial district and elsewhere in Texas and the United States.

47. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optonics Corp. (2018) at 32.

48. AUO directly infringes the '093 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '093 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '093 patent.

49. For example, AUO infringes claim 1 of the '093 patent via its LCD panel model no. T500HVN09. That product includes an “active matrix substrate comprising” each of the limitations of claim 1. The technology discussion above and the example accused TFT-LCD panel (T500HVN09) provide context for Plaintiff’s allegations that each of those limitations are met. For example, the T500HVN09 includes (a) a gate electrode layer, a gate insulating layer and an amorphous silicon semiconductor layer deposited in a substantially stacked fashion on a transparent insulating substrate, viewed from a direction normal to said transparent insulating

substrate, to form a layered structure including a gate electrode, a gate wiring and a thin-film transistor area; (b) a drain wiring formed on a first passivation film disposed on said substrate so as to cover said layered structure; (c) a second passivation film formed as a layer overlying said drain wiring and said first passivation film; (d) source/drain openings passing through said first passivation film and said second passivation film to reach said amorphous silicon semiconductor layer; (e) an opening passing through said second passivation film to reach said drain wiring; and (f) a wiring layer formed by a pixel electrode film disposed on said second passivation film, said wiring layer extending through said opening and openings for connection.

50. At a minimum, AUO has known of the '093 patent at least since February 16, 2018, and no later than the filing of this complaint. On February 16, 2018, AUO received a letter from Dominion Harbor Group, LLC, notifying AUO that it required a license to the '093 patent, and offering to provide claim charts to AUO. Moreover, on May 16, 2018, AUO was provided access to a data room containing claim charts, including for the '093 patent.

51. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include or are made using all of the limitations of one or more claims of the '093 patent to directly infringe one or more claims of the '093 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '093 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*,

<https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

52. On information and belief, despite having knowledge of the '093 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '093 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '093 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

53. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 6,800,872)

54. Plaintiff incorporates paragraphs 1 through 53 herein by reference.

55. VPV is the assignee of the '872 patent, entitled "Active matrix thin film transistor," with ownership of all substantial rights in the '872 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

56. The '872 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '872 patent issued from U.S. Patent Application No. 10/235,493.

57. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '872 patent in this judicial district and elsewhere in Texas and the United States.

58. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optronics Corp. (2018) at 32.

59. AUO directly infringes the '872 patent via 35 U.S.C. § 271(a) by making, having made, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '872 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '872 patent.

60. For example, AUO infringes claim 2 of the '872 patent via its LCD panel model no. T500HVN09. That product includes an "active matrix substrate comprising" each of the limitations of claim 2. The technology discussion above and the example accused TFT-LCD panel (T500HVN09) provide context for Plaintiff's allegations that each of those limitations are met.

For example, the T500HVN09 includes a plurality of crossing gate wirings and drain wirings formed on a transparent insulating substrate; a thin film transistor formed in each area surrounded by said gate wiring and said drain wiring, said thin film transistor including a gate electrode connected to said gate wiring, a gate insulating film formed on said gate electrode so as to have a width which is not more than that of said gate electrode, and a semiconductor film formed on said gate insulating film so as to have a width which is not more than that of said gate electrode; an insulation film for covering said gate insulating film and said semiconductor film; a drain electrode and a source electrode connected to said semiconductor film through a pair of openings formed to said insulation film; and a pixel electrode which is connected to said source electrode and formed on said insulation film, wherein said gate wiring is formed in the same conductive layer as said gate electrode.

61. At a minimum, AUO has known of the '872 patent at least as early as the filing date of the complaint. In addition, AUO has known of the '872 patent since May 16, 2018, when AUO was provided access to a data room containing claim charts, including for the '872 patent.

62. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include all of the limitations of one or more claims of the '872 patent to directly infringe one or more claims of the '872 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '872 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating

advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*, <https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

63. On information and belief, despite having knowledge of the '872 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '872 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '872 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

64. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 6,891,196)

65. Plaintiff incorporates paragraphs 1 through 64 herein by reference.

66. VPV is the assignee of the '196 patent, entitled "Active matrix substrate and manufacturing method therefor," with ownership of all substantial rights in the '196 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

67. The '196 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '196 patent issued from U.S. Patent Application No. 10/617,035.

68. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '196 patent in this judicial district and elsewhere in Texas and the United States.

69. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optronics Corp. (2018) at 32.

70. AUO directly infringes the '196 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '196 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '196 patent.

71. For example, AUO infringes claim 1 of the '196 patent via its LCD panel model no. T500HVN09. That product includes a "lateral electrical field type active matrix substrate comprising" each of the limitations of claim 1. The technology discussion above and the example

accused TFT-LCD panel (T500HVN09) provide context for Plaintiff's allegations that each of those limitations are met. For example, the T500HVN09 includes (a) a gate electrode layer, a gate insulating layer and an amorphous silicon semiconductor layer deposited in a substantially stacked fashion on a transparent insulating substrate, viewed from a direction normal to said transparent insulating substrate, to form a layered structure, including a gate electrode, a gate wiring, a comb-shaped common electrode and a thin-film transistor area; (b) a drain wiring formed on a first passivation film disposed on said substrate so as to cover said layered structure; and (c) a second passivation film formed as a layer overlying said drain wiring and said first passivation film; (d) source/drain openings passing through said first passivation film and said second passivation film to reach said amorphous silicon semiconductor layer, and (e) an opening passing through said second passivation film to reach said drain wiring; wherein (f) a wiring layer extending through said drain opening to said drain wiring and a pixel electrode connected to said source opening are formed by a pixel electrode film disposed on said second passivation film.

72. AUO further infringes the '196 patent via 35 U.S.C. § 271(g) by selling, offering to sell, and/or importing TFT-LCD panels, their components, and/or products containing same, that are made by a process covered by the '196 patent. Upon information and belief the infringing TFT-LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another product.

73. At a minimum, AUO has known of the '196 patent at least as early as the filing date of the complaint. In addition, AUO has known of the '196 patent since May 16, 2018, when AUO was provided access to a data room containing claim charts, including for the '196 patent.

74. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include or are made using all of the limitations of one or more claims of the '196 patent to directly infringe one or more claims of the '196 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '196 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*, <https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

75. On information and belief, despite having knowledge of the '196 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '196 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '196 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such

that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

76. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VI

(INFRINGEMENT OF U.S. PATENT NO. 7,088,401)

77. Plaintiff incorporates paragraphs 1 through 76 herein by reference.

78. VPV is the assignee of the '401 patent, entitled "Liquid crystal display device with less pixel error and method of manufacturing the same," with ownership of all substantial rights in the '401 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

79. The '401 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '401 patent issued from U.S. Patent Application No. 09/609,169.

80. AUO has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '401 patent in this judicial district and elsewhere in Texas and the United States.

81. Upon information and belief, AUO designs, develops, manufactures, assembles and markets flat panel displays and most of its products are TFT-LCD panels. SEC Form 20-F, AU Optonics Corp. (2018) at 32.

82. AUO directly infringes the '401 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those TFT-LCD panels, their components, and/or products containing same that incorporate the fundamental technologies covered by the '401 patent, or by having its controlled subsidiaries do the same. Furthermore, upon information and belief, AUO sells and makes TFT-LCD panels outside of the United States, intending and/or knowing that those panels are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '401 patent.

83. For example, AUO infringes claim 1 of the '401 patent via its LCD panel model no. T500HVN09. That product includes a "liquid crystal display device, comprising" each of the limitations of claim 1. The technology discussion above and the example accused TFT-LCD panel (T500HVN09) provide context for Plaintiff's allegations that each of those limitations are met. For example, the T500HVN09 includes a first electrode formed on a substrate as one of two electrodes of an accumulation capacitor, said first electrode comprising a portion of a gate bus line pattern of said liquid crystal display device; an insulating film formed on said first electrode to cover said first electrode; a second electrode formed on said first electrode via said insulating film as the other electrode of said accumulation capacitor and including a first conductive film and a second conductive film formed on said first conductive film; a protective insulating layer formed on said second electrode and having a contact hole which is formed over said first and second electrodes, a bottom of said contact hole being defined by said second conductive film; and a thin film transistor comprising source and drain electrodes which are formed on said insulating film and comprise said second conductive film, wherein one of said first conductive film and said second conductive film comprises a layer formed of a material selected from the group consisting of Al (Aluminum), W (Tungsten), Cu (Copper), Ta (Tantalum) and TaN (Tantalum Nitride).

84. AUO further infringes the '401 patent via 35 U.S.C. § 271(g) by selling, offering to sell, and/or importing TFT-LCD panels, their components, and/or products containing same, that are made by a process covered by the '401 patent. Upon information and belief the infringing TFT-LCD panels, their components, and/or products containing same are not materially changed by subsequent processes, and they are neither trivial nor nonessential components of another product.

85. At a minimum, AUO has known of the '401 patent at least since February 16, 2018, and no later than the filing of this complaint. On February 16, 2018, AUO received a letter from Dominion Harbor Group, LLC, notifying AUO that it required a license to the '401 patent, and offering to provide claim charts to AUO. Moreover, on May 16, 2018, AUO was provided access to a data room containing claim charts, including for the '401 patent.

86. Upon information and belief, since at least the above-mentioned date when AUO was on notice of its infringement, AUO has actively induced, under U.S.C. § 271(b), distributors, importers and/or consumers that purchase or sell TFT-LCD panels that include or are made using all of the limitations of one or more claims of the '401 patent to directly infringe one or more claims of the '401 patent by using, offering for sale, selling, and/or importing the TFT-LCD panels. Since at least the notice provided on the above-mentioned date, AUO does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '401 patent. Upon information and belief, AUO intends to cause, and has taken affirmative steps to induce, infringement by the distributors, importers, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the TFT-LCD panels (*see, e.g.*, <https://www.auo.com/en-global/Events/index> (showing AUO's participation in SID Display Week 2017)), creating established distribution channels for the TFT-LCD panels into and within the

United States, manufacturing the TFT-LCD panels in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

87. On information and belief, despite having knowledge of the '401 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '401 patent, AUO has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AUO's infringing activities relative to the '401 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

88. VPV has been damaged as a result of AUO's infringing conduct described in this Count. AUO is, thus, liable to VPV in an amount that adequately compensates VPV for AUO's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

INJUNCTIVE RELIEF

89. Plaintiff seeks preliminary and permanent injunctions as a result of AUO's infringement of the Asserted Patents. Plaintiff is likely to succeed in showing that AUO infringes the Asserted Patents. Because of that infringement, Plaintiff has suffered an irreparable injury, and the remedies available at law, such as monetary damages, are inadequate to compensate for that injury. For example, if Plaintiff must enforce a judgment against AUO in China, Plaintiff will face a historically challenging burden in persuading a Chinese court to enforce a judgment from a U.S.

court, likely preventing Plaintiff from obtaining any monetary damages from AUO. Considering the balance of hardships between the Plaintiff and AUO, a remedy in equity is warranted; and the public interest would not be disserved by a permanent or preliminary injunction.

CONCLUSION

90. Plaintiff is entitled to recover from AUO the damages sustained by Plaintiff as a result of AUO's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

91. Plaintiff has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

92. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

93. Plaintiff respectfully requests that the Court find in its favor and against AUO, and that the Court grant Plaintiff the following relief:

1. A judgment that AUO has infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of all damages sustained by Plaintiff as a result of the acts of infringement by AUO;
3. A preliminary and permanent injunction against AUO, its subsidiaries, or anyone acting on its behalf from making, using, selling, offering to sell, or importing any products

that infringe the Asserted Patents, and any other injunctive relief the Court deems just and equitable;

4. A judgment and order requiring AUO to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
5. A judgment and order requiring AUO to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;
6. A judgment and order finding this to be an exceptional case and requiring AUO to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
7. Such other and further relief as the Court deems just and equitable.

Dated: July 10, 2018

Respectfully submitted,

/s/ Patrick J. Conroy w/permission Claire
Abernathy Henry

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